

Berling Magnets were used on the Liberator Trucks, with an auxiliary battery coil for starting, located on the dash. The interrupter points on this magnet are very sensitive to dust and wear, and require the attention of a mechanic who is familiar with the magnet. It is not easily removed from the engine for examination or adjustment.

(m) MOTORCYCLES: Observations made during the course of the Transcontinental Convoy indicate that the present 40"x3" motorcycle tire is not large enough to give the desired amount of service in view of this nature. This contention is borne out by the fact that during the trip a great amount of rim and spoke trouble was noted upon the rear wheels of both Indian and Harley-Davidson motorcycles. This was caused by the fact that the three inch tires do not present a sufficient amount of air cushion for a vehicle of this weight. The solution of the problem is by using the 40 inch G.C. Motorcycle tire now used on the large side-car type motorcycles. Apply to this a 27"x3" tire, which will give the desired air cushion without bringing about the necessity for extensive structural changes in the vehicles, and increasing rather than decreasing the present mud guard clearance. The overall outside diameter of a 27"x3" tire is one-half inch less than the same dimension of a 40"x3". The Firestone Tire & Rubber Co. of Akron, Ohio, are at present in production upon a tire of this size.

The medium weight Harley-Davidson motorcycles, known by the catalog name of "Sport Model", are fitted with a 26"x3" tire. These machines weigh approximately 100 lbs. less than the standard side-car type Harley-Davidson. They gave absolutely no spoke or rim trouble in spite of the fact that the tires on both machines were ridden, throughout the entire trip in an under inflated condition. The 26"x3" tire upon the large machine is overinflated to such an extent that it is necessary to carry a full 40 lbs. of air to prevent the rim from being dented by rocks. Carrying such a high pressure causes the wheel to bounce at average road speed, setting up a grinding action upon the tread which wears it out very rapidly.

The Schebler carburetor produced by the Wexler-Schebler Mfg. Company, Indianapolis, Ind., is standard equipment upon all motor cycles in Military use. It is the only carburetor up to date that has been satisfactorily laid out to be used in production quantity.

Considerable trouble was noticed with all Schebler carburetors on this trip due to the fact that the throttle shaft wore very rapidly in the cast brass carburetor body. This causes an air leak around the throttle shaft, upsets the mixture and causes the motor to race and overheat when an attempt is made to throttle down. This throttle shaft should be made of larger diameter and should be carried in bushings pressed into the carburetor body proper.